



FM4 Filter Modeler

Pilot's Handbook

Manuel de pilotage

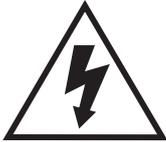
Pilotenhandbuch

Pilotenhandboek

Manual del Piloto

取扱説明書

Important Safety Instructions



CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN



WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE APPLIANCE TO RAIN OR MOISTURE.

CAUTION: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The lightning symbol within a triangle means “electrical caution!” It indicates the presence of information about operating voltage and potential risks of electrical shock.



The exclamation point within a triangle means “caution!” Please read the information next to all caution signs.

Please Note:

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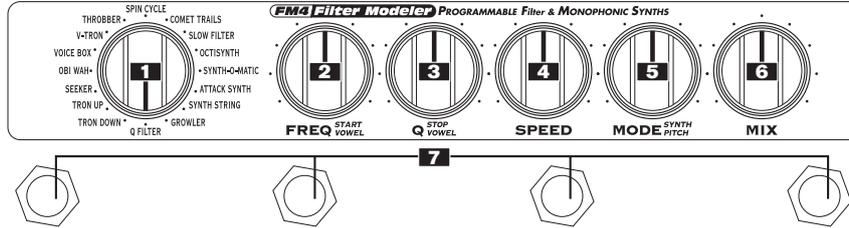


You should read these Important Safety Instructions. Keep these instructions in a safe place



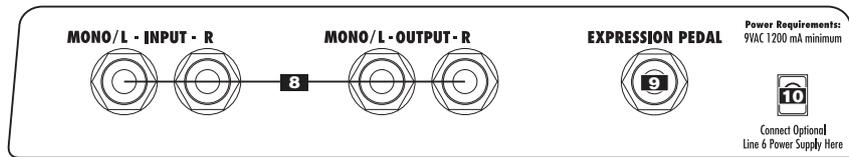
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- This apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- **WARNING:** To reduce the risk of fire or electric shock do not expose this apparatus to rain or moisture.
- The appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- Connect only to AC power outlets rated: 100/120V 220/240V 50/60Hz (depending on the voltage range of the included power supply).
- Prolonged listening at high volume levels may cause irreparable hearing loss and/or damage. Always be sure to practice "safe listening."
- Service is required when the apparatus has been damaged in any way, such as:
 - power-supply cord or plug is damaged.
 - liquid has been spilled or objects have fallen into the apparatus.
 - the unit has been exposed to rain or moisture.
 - the unit is dropped or the enclosure is damaged.
 - the unit does not operate normally or changes in performance in a significant way.





- 1. MODEL SELECTOR** - This is where you pick the model you want to use; it comes up pre-set to a great sound.
- 2. FREQ** - Typically sets the frequency of your filter or synth model. Check the filter model descriptions for more details.
- 3. Q** - Typically sets the width of your filter. Check the filter model descriptions for more details.
- 4. SPEED** - Check the filter model descriptions for more details.
- 5. MODE** - Check the filter model descriptions for more details.
- 6. MIX** - This knob is always used to set the mix between the dry/direct/unprocessed signal and the processed signal. Turn counterclockwise for more dry signal.
- 7. STOMP SWITCHES** - These switches choose one of the 4 memories. Step on a switch to get the sound that was stored there. To change what's in a memory, hold one of these switches for 3 seconds: that will store whatever sound you are currently hearing, so you can recall it by pressing that switch.

SYNTH TIP: Like all monophonic guitar synths, the Filter Modeler synth models will track best with neck pickups, palm muting, and single note lines.



- 8. INPUT/OUTPUT** - Just follow the labels and plug in the inputs and outputs. The left input also acts as an on/off switch: the unit will be off if no cable is connected here. When running with batteries, unplug the left input to conserve power when not using the pedal.
- 9. EXPRESSION PEDAL** - The optional Line 6 expression pedal lets your foot control one or more of the parameters of your effect while your hands are busy making music. Operation is designed to be simple: Power off your Stomp Box Modeler by unplugging the LEFT/MONO INPUT. Next, plug in your Expression Pedal, and set the expression pedal to the full heel-down position. Plug the left/mono input back in (this turns the Stomp Box back on) and dial up a sound you like. Now press the expression pedal forward to the fully toe-down position, and set one or more of your knobs to another setting. Rock back and forth on your expression pedal, and you'll hear your sound blend between the two sound settings you just made. Store this sound into one of your pedal's memories, and both the toe-down and heel-down "snapshots" of the sound will be saved. Use as many and whichever knobs you like with the expression pedal, except the model selector. Recalling a stored memory later without the expression pedal connected gives you the heel-down setting only.
- 10. POWER SUPPLY** - You can purchase an optional Line 6 AC power supply to run your pedal or you can choose to power your Stomp Box Modeler with 4 C size batteries. We recommend alkaline batteries for long life. Unplugging the left/mono input turns the pedal off, so be sure to unplug it when you're not using the pedal to conserve battery power. All four lights on your pedal will flash when your batteries have nearly run out.

True Bypass & Alternate Bypass

Stomp Box Modelers include mechanically switching relays that switch in when you bypass the pedal (by kicking the stomp switch to turn off the memory you are using). These relays route your signal directly from input jack to output jack, around all the circuitry, for absolutely no processing or analog-to-digital conversion while in bypass. There's also an alternate bypass mode available that keeps the DSP engaged while bypassed. This buffered bypass is good for when you have long cable runs from your Stomp Box to your amp. If you want this Alternate Bypass mode, hold the first and third (from the left) stomp switches while plugging in the left/mono guitar input. (When the left/mono input is unplugged, your pedal is powered off.) Your pedal will remember to stay in this Alternate Bypass mode until you re-enable True Bypass.

Restoring Factory Presets

The Stomp Box Modelers come pre-programmed with a set of great tones in their memories. The sounds that you save replace these factory settings. If you ever want to recall the factory sounds – and erase the sounds you might have saved – press the far left and far right switches while plugging in the left/mono guitar input. (When the left/mono input is not plugged in, the pedal is powered off.)

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Learn more about your FM4 Filter Modeler online. Visit our online discussion group or check www.line6.com/manuals for the latest revision of your FM4 Filter Modeler Pilot's Handbook. While you're online be sure to register your FM4 Filter Modeler or simply fill out and mail us your included registration card. Registering gets you all set up for warranty service should you have an issue with your FM4 Filter Modeler, and also qualifies you for contests, special offers and more.

Tron Up/Tron Down – inspired by the Mu-Tron® III

What self-respecting filter-junkie would be without an envelope follower? Part auto-wah, part triggered filter, it's all about wacky, and your Filter Modeler gives it to you both coming and going. Go ahead – unbutton that shirt, put on the flares, and get down with your bad self! You've got your choice of Tron Down and Tron Up, to get you both flavors of this effect a la the original. **FREQ** determines how far apart the high and low points of the filter sweep will be. **Q** sets the width of the filter. **SPEED** selects High or Low frequencies for the focus of the filter effect. **MODE** selects the type of filter effect (Low Pass, Band Pass, or High Pass).



Seeker – inspired by the Z-Vex Seek Wah

The Seek Wah is a box that contains 8 “parked wah” filters that can be set at varying positions and then sequenced through, creating a pulsating hypnotic vibe (with no detectable side effects!). In our ode to this unique creation, we give you the Seeker. Here's how it works: **FREQ** lets you select from a range of different patterns of sequenced wah filter positions. Turn slowly to find the preset that works best for your tune. **Q** sets the width of the filters. **SPEED**, as on the original, controls the rate (time) that it takes to cycle through the filters. **MODE** sets the number of filter steps in the sequence. The Seek Wah lets you choose 4, 6, or 8. The Seeker allows any choice from 2 to 9 steps – Hello, odd time signatures!



Obi-Wah – based on Oberheim® Voltage Controlled Filter

Sample and Hold filters create changes in tone by randomly emphasizing certain frequencies. With the Obi-Wah model, the **MODE** knob gives you the option to effect the high, low, or middle frequencies of your tone. If this seems daunting to understand at first, just close your eyes, Luke, and use The Force... **FREQ** sets the area of frequency where the filter will change your tone. **Q** controls the width of the filter. **SPEED** sets the rate of the random filter changes. **MODE** selects the type of filter effect: Low Pass (reduces high frequencies), Band Pass (emphasizes mid frequencies), or High Pass (reduces bass).



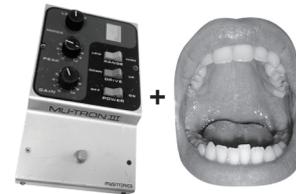
Voice Box – inspired by Vocoders, Vocal Tracts & Surgical Tubing

This model gives your guitar a sound that's typical of a classic “talk box.” The **FREQ** knob picks a start vowel (a, e, i, o, u), and the **Q** knob picks a stop vowel (a, e, i, o, u). **MODE** chooses between the Automatic and Pedal modes - you choose one of four settings for shifting back and forth between vowel one and two automatically at the speed set by the **SPEED** control. Or, select Pedal mode for expression pedal control of the shift. This effect, like other talking pedal effects, sounds particularly great with a distortion pedal in front of it. **SPEED** sets how long it takes to “speak” from one vowel to the other in Automatic mode.



V-Tron – Voice Box meets Mu-Tron III.

In this model's sonic playland, your guitar again “speaks” with an almost human voice, but now it does so in response to your playing. Each time you strike a new note or chord, the vowel sequence will be “spoken.” You can choose whether the speaking will go from the start vowel to the stop vowel and call it a day (UP Mode), or turn around and come right back again (UP & RETURN). **FREQ** controls the sound of the starting vowel (a, e, i, o, u). **Q** controls the sound of the stop vowel (a, e, i, o, u). **SPEED** sets how long it takes to “speak” from one vowel to the other. **MODE** chooses between the two modes: UP, or UP & RETURN.



Throbber – inspired by the Electrix® Filter Factory.

Like the LFO section of the versatile Filter Factory, the Throbber alters the brightness of your tone with an emphasis on a specific frequency that you can select with the freaky **FREQ** control. **Q** sets the amount of emphasis from purring to howling. This effect is perfect for those hipster Electronica sounds, and we've also noticed U2's The Edge making appearances with a Filter Factory in his rack. **FREQ** targets a specific frequency range for the filter. **Q** controls the width of the filter. **SPEED** sets the rate of the LFO. **MODE** selects between four different wave shapes (Ramp Up, Ramp Down, Triangle or Square).



Spin Cycle – inspired by Craig Anderton's Wah/Anti-Wah.

This effect takes particular advantage of the Filter Modeler's stereo capabilities. Imagine two wah pedals panned left and right that work in the opposite direction from each other. One goes up while the other goes down. Now add the fact that these wah pedals are sweeping from minimum to maximum automatically. This is what headphone mixes are made for! When operating in mono, the wah and anti-wah will be united on the single output. On this model, the **MODE** knob is used to adjust a “peak follower”, which can be used to make the speed of this effect sensitive to your playing volume. **FREQ** controls the range of the filter emphasis in the wah tone. **Q** controls the width of the filter. **SPEED** sets the speed at which the wah effects sweep. **MODE** controls the amount of Volume Sensitivity for the speed of the effect.



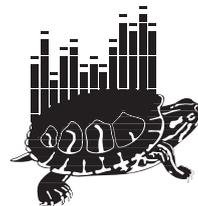
Comet Trails – the result of too much Mountain Dew.

After several days spent crafting the code that makes up our digital secret sauce, we found ourselves one afternoon surrounded by 10 empty cans of Dew, and sounds from another world. We rushed from the office, shouting to anyone who would listen, “Dude! Check this out!” Now that same caffeine and sugar-fueled rush is available to you at the stomp of a Filter Modeler foot switch. Somewhere inside your Filter Modeler are seven filters, all chasing each other around and looping back and forth across the great expanse of sonic space. We call it Comet Trails...**FREQ** controls the range of the filters. **Q** controls the width of the filters. **SPEED** sets the rate of the filter movement. **MODE** controls the Gain of the whole shebang.



Slow Filter – it’s Swell!

This triggered filter rolls off the high end of your tone, with adjustable speed. You get a choice of having your tone sweep from dark to bright (the UP mode), or bright to dark (the DOWN mode). The **Q** lets you further shape your tone by creating a sharp boost at the point of the high end roll off. Just plug in your guitar or other noise maker and you’ll see soon enough what we’re talking about. **FREQ** sets the frequency where the filter begins its tone shaping roll-off. **Q** controls the width of the filter. **SPEED** sets the speed of the filter sweep. **MODE** selects between two modes: UP or DOWN.



Octisynth – inspired by eight armed denizens of the deep.

Everyone knows that all you need is a bottleneck and a reverb tank to get great whale sounds, but how about our often-ignored deep sea friend the Octopus? To emulate the call of the famous invertebrate, we’ve provided you with a subtle, velocity sensitive combination of Ring Modulator, Synthesizer VCO and Vibrato pedal. Your guitar’s volume knob gets in on the action by controlling the frequency of the oscillator. Set it low to mimic the large Octopus dofleini of the North Pacific, or turn it all the way up to communicate with the inch long Octopus micropysus. **FREQ** controls filter content, adding second order harmonics. **Q** controls the width of the filters, from mild to wild. **SPEED** sets the rate of the Vibrato. **MODE** controls the Depth of the Vibrato.



Synth-O-Matic – inspired by a collection of vintage analog synths.

This model features waveforms captured from a mouth watering collection of vintage synths: a Moog Modular (which is the unit pictured on the right), Oberheim Synthesizer Expander Module, Sequential Circuits Prophet 600, Arp Explorer-I Model 2900, and Studio Electronics SE-1 – groovy analog circuitry giving its all to make mind-warping waveforms. **FREQ** sets the frequency of the filter, which determines how bright your sound will be. **Q** sets filter width to add more or less additional emphasis on the selected frequency. **SPEED** selects one of the eight synth waveforms. **MODE** controls the Pitch of the synth sound.



Attack Synth – based on the Korg® X911 Guitar Synth.

We borrowed the unit that inspired this model from the delightful and delicious Eric Dover (of Jellyfish and Imperial Drag). Your Filter Modeler’s Attack Synth uses a waveform modeled after one of those in the X911, along with some of the wave shaping functions that are found on the original X911. **FREQ** controls the stop frequency of the filter (labeled VCF on the X911). **Q** selects between Square, Pulse Width Modulation, and Ramp for the synth waveform. **SPEED** controls the Attack (sets the time it takes to get to the stop frequency). **MODE** controls Pitch over a two octave range.



Synth String – based on the Roland® GR700 Guitar Synth

The GR700 is one of the largest guitar foot pedals ever made. It also happens to have some of the coolest analog synth sounds designed for guitar. Guitar synth pioneers like Adrian Belew considered the it an essential tool for their trailblazing sonic explorations. Your Filter Modeler's Synth String model is based on one of the sounds of the GR700. **FREQ** controls a low pass filter tone control. **Q** controls the attack time. **SPEED** sets the speed of the vibrato-pulse width modulation. **MODE** controls the Pitch of the effect over a two octave range.



Growler – Roland® GR700 meets Mu-Tron® III

If you've been paying attention, you've noticed that our model based on the Mu-Tron® III has been making a number of appearances in the Filter Modeler's hit parade. This time it's stepping out in the distinguished company of another GR700-inspired tone. Check out the dynamic duo in action. **FREQ** controls the frequency of the filter (surprise). **Q** sets the width of the filter. **SPEED** dials in the speed of the vibrato-pulse width modulation. **MODE** controls the Pitch of the synth over a two octave range.



Q Filter – your very own parked wah!

You've heard it before on UFO records and from Brian May of Queen – it's a wah “parked” in one position that creates a unique, notched kind of sound. With the Filter Modeler, this effect is programmable and repeatable! You can even use this model as a wah pedal if you connect an EX-1 Expression Pedal, and set it to sweep **FREQ** from low to high. **FREQ** controls the frequency of the filter (that's like the position of the wah pedal). **Q** controls the width of the filter. **SPEED** sets the gain (how much boost the effect gives to your guitar). **MODE** selects the type of filter effect (Low Pass, Band Pass, or High Pass).



